# 2018-19 Ohio Deer Summary

# **Our Deer Management Strategy**

The goal of Ohio's deer program is to provide a deer population that maximizes recreational opportunities including viewing, photographing, and hunting, while minimizing conflicts with agriculture, motor travel, and other areas of human endeavor. This has been the Division of Wildlife's goal for over 50 years. Historically, farmer and rural landowner attitude surveys have been used to establish population goals for most counties. While the Division of Wildlife believes these goals represent a reasonable compromise concerning appropriate deer population levels, we have updated population goals using a combination of farmer and hunter surveys completed during the fall of 2015. Maintaining the deer population at or near goal is accomplished through harvest management.



OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE

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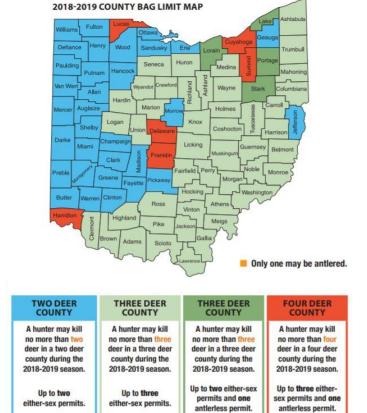
# **DID YOU KNOW?**

- Hunter satisfaction has been steadily increasing since 2015.
- While archery season is a major contributor to the annual deer harvest, annual surveys show that archery participation (71% of hunters bowhunted in 2018) has recently declined since peaking at 82% in 2014.
- From 2011-2015 hunters averaged 20 days pursuing deer in 2018 deer hunters spent only 15 days afield.
- The percentage of adult bucks in the harvest has been increasing steadily since the mid-1990s. In 2018, more than 60% of the bucks harvested were at least 2 ½ years old (a new record), and nearly 30% were older than 3 ½.
- About one in 2,500 deer permit buyers (0.04%) actually filled their 6-deer bag limit in 2018.
- More than 20,000 free-ranging deer have been tested for CWD since 2002 and, to-date, none have tested positive for the disease.
- The proportion of the harvest taken with straight-walled cartridge rifles has increased each year since they were first legalized in 2014. In 2018, SWC rifles were responsible for nearly ½ of the youth season harvest.
- New regulations helped reduce the antlerless harvest on public land by 44% in 2018.

# **SEASONS AND PERMITS**

A valid hunting license (resident = \$18, nonresident = \$140, youth = \$9, senior = \$9) and a deer permit (resident either-sex = \$23, nonresident either-sex = \$40, antlerless = \$14, youth = \$11, senior = \$11) are required to hunt deer in Ohio. Hunters could harvest up to six deer with a combination of either-sex and antlerless permits (Figure 1); however, they were limited to one antlerless permit per county. Antlerless permits were valid only in 10 urban counties during the first nine weeks of the archery season, as well as during all Division of Wildlife controlled hunts. Deer harvested during controlled hunts (maximum of six) did not count against a hunter's statewide or county bag limits.

Figure 1. Harvest regulations for the 2018-19 season as presented in the Ohio Hunting and Trapping Regulations, Publication 5085.



Antierless permits

are NOT valid

Up to three

either-sex permits

Up to four

either-sex permits

As always, hunters were limited to one antlered deer and had the opportunity to hunt deer during Ohio's four seasons, including archery (Sep. 29, 2018 - Feb. 3, 2019), gun (Nov. 26 - Dec. 2, 2018), bonus gun (Dec. 15-16, 2018), and muzzleloader (Jan. 5-8, 2019). Youth (17 and under) season was Nov. 17-18, 2018.

The Division of Wildlife issued 399,306 deer permits during the 2018-19 license year, 6.9 percent fewer than last year and the ninth consecutive year that sales have declined (Table 1). Permit sales for 2018-19 were down more than 36% from the recent peak in 2009-10. The decreasing trend is likely due to several factors including fewer available permits. As noted, antlerless permits were only valid in 10 urban counties in 2018-19. As a result, antierless permit sales were down 89% compared to the 2013-14 season (the last season that antlerless permits were valid statewide). While the herd is growing (see "Understanding Population Trends" on page 17), deer populations in many areas are still smaller than they were in the mid- to late-2000s (Figure 2). Finally, and most notably, the number of deer permits issued is largely dependent upon the number of hunters participating. Since 2011 the number of individuals purchasing at least one deer permit has dropped from 359,000 to 294,000 - a decline of 18% in just the last seven years (Figure 3).

Figure 2. Statewide buck harvest, 1977-2018.

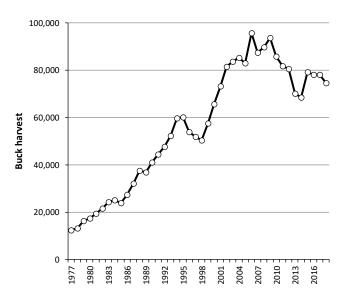
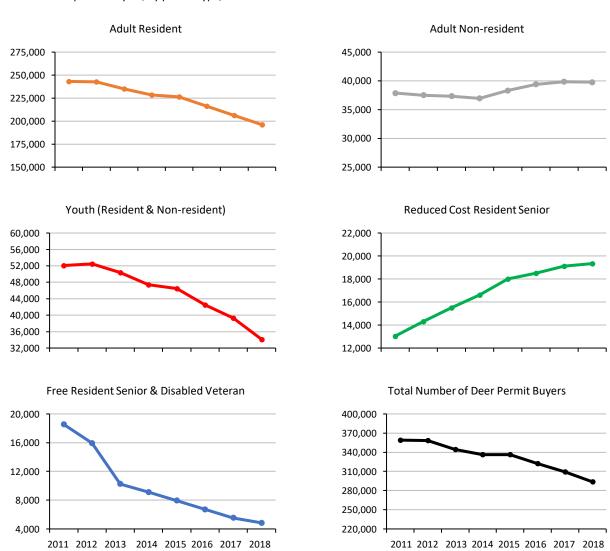


Table 1. Deer Permits Issued, 2007 - 2018.

V		Permit		Takal
Year	Youth	Either-Sex	Antlerless-only	Total
2007-08	65,647	411,522	101,197	578,366
2008-09	67,338	396,704	147,400	611,442
2009-10	67,828	394,620	162,460	624,908
2010-11	66,300	380,462	162,655	609,417
2011-12	62,864	377,302	163,383	603,549
2012-13	64,634	397,333	126,918*	588,885
2013-14	60,961	373,315	101,400	535,676
2014-15	58,227	378,921	57,230	494,378
2015-16	58,055	392,533	15,514	466,102
2016-17	52,706	373,791	18,669	445,166
2017-18	49,529	367,753	11,724	429,006
2018-19	42,781	345,408	11,117	399,306

<sup>\*</sup>Restrictions on the use of the antierless permit began in 2012 and were expanded through 2015.

Figure 3. Number of permit buyers, by permit type, 2011 – 2018.



# HARVEST SUMMARY

Hunters harvested 172,049 deer during the 2018-19 season, about 7% less than the three-year average (Table 2). The total includes 74,517 bucks, 80,763 does, and 16,769 button bucks. Coshocton County once again led the state with 6,041 deer killed. A harvest summary by season for the top five counties is presented in Table 3, and a complete harvest summary by county and season is available in Appendix 1.

The harvest total during the traditional statewide gun season was 60,621 deer, 14.5% less than the three-year average (Table 2). Coshocton, Ashtabula, Tuscarawas, Muskingum, and Guernsey counties led the state in gun harvest (Table 3). The bonus gun season harvest was 9,636 deer. Ashtabula County hunters led the way, harvesting 368 deer during the two-day season, with Tuscarawas (282), Coshocton (261), Knox (227), and Trumbull (227) counties rounding out the top five.

Archers reported harvesting 79,098 deer, about a 3% decline compared to the three-year average (Table 2). Archers accounted for 46% of the entire deer harvest, and for the sixth year in a row, more deer were taken during archery season than the week of gun season. By comparison, just 15 years ago the archery harvest only accounted for about 25% of the annual harvest (Figure 4). This shift in the harvest is likely due to the ever-increasing interest and participation in archery hunting. In 1981, only one of three gun hunters also bowhunted. In 2018, two-thirds of gun hunters also hunted the archery season.

Figure 4. Percent of the total annual deer harvest taken during the archery and traditional 7-day gun season, 1977-2018.

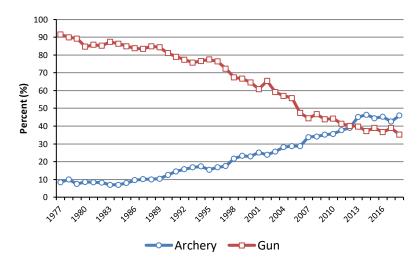


Table 2. Buck, doe, button buck, and total harvests by season, 2018-19 and three-year average1.

Bu	cks <sup>2</sup>	D	oes	But	tons		Total		
2018	3yr avg.	2018	3yr avg.	2018	3yr avg.	2018	3yr avg.	Diff. (%)	

Gun											
Traditional (7-day)	23,252	26,659	30,327	35,909	7,042	8,318	60,621	70,886	-14.5		
Bonus (2-day)	3,194	3,351	5,341	6,156	1,101	1,398	9,636	10,906	-11.6		
Youth	3,829	3,261	2,073	2,041	683	713	6,585	6,015	9.5		
Total	30,275	33,272	37,741	44,106	8,826	10,430	76,842	87,807	-12.5		

Archery									
Crossbow	26,114	25,214	21,689	21,004	4,346	4,491	52,149	50,709	2.8
Vertical Bow	13,081	15,243	11,993	13,644	1,875	2,258	26,949	31,146	-13.5
Total	39,195	40,458	33,682	34,648	6,221	6,749	79,098	81,855	-3.4

Muzzleloader	4,325	3,978	8,389	8,291	1,459	1,609	14,173	13,879	2.1
Total	74 517	78 469	80 763	88 076	16 769	19 038	172 049	185 584	-73

<sup>&</sup>lt;sup>1</sup>Average of 2015-16, 2016-17, and 2017-18 seasons

<sup>&</sup>lt;sup>2</sup>Includes bucks at least 1.5 years old with antlers less than three inches in length (2,421), and bucks with shed antlers (727).

Table 3. Buck, doe, button buck, and total harvest by season for the top five counties, 2018-19.

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Season	County	Bucks*	Does	Buttons	Total	2018	2017
	Coshocton	726	1,182	267	2,175	1	1
	Ashtabula	607	1,096	324	2,027	2	4
Gun	Tuscarawas	709	1,064	220	1,993	3	2
	Muskingum	695	1,031	192	1,918	4	3
	Guernsey	649	881	199	1,729	5	5
	Ashtabula	101	210	57	368	1	3
	Tuscarawas	76	165	41	282	2	2
Bonus Gun	Coshocton	79	142	40	261	3	1
	Knox	64	127	36	227	4	5
	Trumbull	60	131	36	227	5	12
	Coshocton	898	807	117	1,822	1	1
	Licking	756	665	131	1,552	2	2
Crossbow	Ashtabula	592	684	171	1,447	3	3
	Tuscarawas	712	615	102	1,429	4	4
	Trumbull	588	505	147	1,240	5	5
	Coshocton	463	427	65	955	1	1
	Licking	376	380	40	796	2	2
Vertical Bow	Tuscarawas	363	373	43	779	3	3
	Knox	337	334	41	712	4	5
	Muskingum	384	283	22	689	5	4
	Coshocton	126	318	41	485	1	1
	Tuscarawas	125	292	50	467	2	4
Muzzleloader	Muskingum	168	257	30	455	3	2
	Guernsey	115	280	39	434	4	3
	Licking	140	234	42	416	5	6
	Coshocton	158	102	28	288	1	1
	Holmes	131	86	20	237	2	9
Youth	Tuscarawas	121	82	23	226	3	2
	Knox	102	58	25	185	4	10
	Muskingum	105	52	15	172	5	3
	Coshocton	2,473	3,005	563	6,041	1	1
	Tuscarawas	2,118	2,618	485	5,221	2	2
Total	Ashtabula	1,648	2,523	713	4,884	3	4
	Muskingum	2,068	2,241	337	4,646	4	3
*Includes bucks at least 1.	Licking	1,968	2,194	412	4,574	5	5

<sup>\*</sup>Includes bucks at least 1.5 years old with antlers less than three inches in length and bucks with shed antlers.

Crossbow hunters harvested 52,149 deer, an increase of 3% over the three-year average (Table 2). Coshocton County led the state with 1,822 deer, followed by Licking, Ashtabula, Tuscarawas, and Trumbull counties. The vertical bow harvest (compounds, recurves, and longbows) was 26,949 deer, 13.5% fewer than the three-year average. Coshocton County archers led the state with a harvest of 955 deer. Licking, Tuscarawas, Muskingum, and Knox were the other top vertical bow harvest counties.

There were 14,173 deer harvested during the four-day statewide muzzleloader season, an increase of 2% over the three-year average harvest (Table 2).

Coshocton County was the top spot for muzzleloader hunters with a harvest of 485 deer, followed by Tuscarawas, Muskingum, Guernsey, and Licking counties.

Youth hunters took 6,585 deer during the 2-day youth season, an increase of 9.5% compared to the three-year average (Table 2). Top harvest counties for the two-day youth season were Coshocton, Holmes, Tuscarawas, Knox, and Muskingum counties.

#### Nonresident Hunters

Among permit buyers, nonresident hunters accounted for 12.6% of the deer permits issued, 11.4% of the harvest, and 17% of the antlered harvest in the 2018-19 season. Just over 18% of the nonresident harvest (2,012 deer) was taken on public land, which is more than three times the rate of residents (6%). The nonresident harvest was 64% antlered. By comparison, the resident harvest was only 39% antlered. The top five nonresident states (by total harvest) were Pennsylvania (2,461), Michigan (1,567), West Virginia

(1,298), North Carolina (1,094), and Florida (939). The top five counties for nonresident deer harvest were Athens (21.5%), Adams (21.2%), Pike (20.4%), Meigs (19.1%), and Morgan (18.0%).

Nearly two-thirds of the nonresident harvest (62%) occurred during archery season, with the gun and muzzleloader seasons accounting for an additional 26% and 9%, respectively (Table 4). Nonresidents took a much larger percentage of their harvest during archery season than either residents or landowners. Nearly 70% of the antlered and over half of the antlerless deer harvested by nonresidents were taken during archery season.

#### **Landowners**

Landowners reported harvesting 47,961 deer, almost 28% of the total harvest. The proportion of the harvest taken by landowners increased substantially from 1995 (19%) to 2005 (28%), but has remained between 26 and 28% of the total harvest since. While the total landowner harvest was nearly equally split between the gun (42%) and archery (44%) seasons, there was a notable difference in the timing of antlered and antierless harvests. Most (54%) antiered deer were taken during the archery season (Table 4), but 63% of antlerless deer were taken in the firearms seasons. Landowner proportion of the total county harvest varied considerably across the state, but was greatest among southeastern counties. Meigs County led the state with landowners accounting for 42% of the total reported harvest. Landowners also accounted for a significant portion of the total harvest in Washington (42%), Scioto (39%), Gallia (38%), and Holmes (38%) counties (Table 5).

Table 4. Proportion of antlered, antlerless, and total harvest by season, for adult residents, nonresidents, and landowners during the 2018-19 deer season.

	Ar	ntlered Har	vest	Ar	ntlerless Har	vest	Total Harvest			
	Resident	Non- resident	Landowner	Resident	Non- resident	Landowner	Resident	Non- resident	Landowner	
Archery	55	69	54	44	51	38	49	62	44	
Gun	34	22	37	36	32	46	36	26	42	
Bonus Gun	5	2	4	7	4	7	6	3	6	
Muzzleloader	6	7	5	11	13	10	9	9	8	

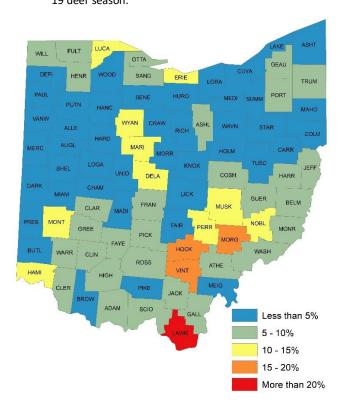
Table 5. Top 10 Landowner harvest counties for the 2018-19 deer season.

County	Percent of Total Harvest by Landowners	Percent of Antlered Harvest by Landowners (Rank)	Percent of Antlerless Harvest by Landowners (Rank)
Meigs	42	36 (3)	48 (1)
Washington	42	35 (5)	47 (2)
Scioto	39	32 (7)	44 (3)
Gallia	38	36 (1)	40 (6)
Holmes	38	36 (2)	39 (7)
Guernsey	37	35 (6)	38 (10)
Monroe	37	32 (8)	40 (5)
Morgan	36	27 (24)	43 (4)
Jackson	36	32 (9)	38 (9)
Perry	35	31 (11)	39 (8)

### **Public Land**

While public land only accounts for roughly 4% of the total land area in the state, resident and nonresident hunters reported harvesting 10,862 deer, 6% of the season total, on public land. Antlered bucks accounted for 46% of

Figure 5. Percent of harvest taken on public land during the 2018-19 deer season.



the public land harvest, slightly more than the proportion of antlered bucks in the private land harvest (41%). With just over 80,000 acres of public land including the Wayne National Forest, Crown City Wildlife Area, and Dean State Forest, Lawrence County once again held the top spot for the proportion of harvest taken on public land (20%; Figure 5). The other top counties were Hocking (17.2%), Morgan (16.2%), Vinton (15.7%), and Lucas (13.7%). Nonresident hunters accounted for more than 25% of the public land harvest in eight of the top 10 counties (Table 6).

Table 6. Public land and total harvest, by residency status, in the top 10 counties for public land acreage during the 2018-19 deer season.

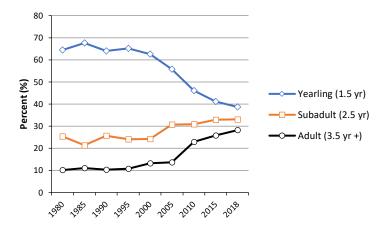
		Public Lan	ıd	R	esident H	arvest			Nonreside	ent Harvest	
County	Acres*	% of County Area Open to Public Hunting	% of County Harvest Taken on Public Land	Public Land	County Total	% of Harvest Taken on Public Land	Public Land	County Total	% of Harvest Taken on Public Land	% of County's Total Harvest Taken by NR	% of County's Public Land Harvest Taken by NR
Lawrence	82,000	28	20.5	254	1,514	16.8	115	288	39.9	16.0	31.2
Scioto	72,000	18	9.2	120	1,834	6.5	79	321	24.6	14.9	39.7
Muskingum	50,000	12	12.9	426	3,974	10.7	172	672	25.6	14.5	28.8
Vinton	49,000	19	15.8	238	1,980	12.0	137	399	34.3	16.8	36.5
Hocking	45,000	17	17.2	325	2,374	13.7	155	420	36.9	15.0	32.3
Washington	40,000	10	7.9	191	2,668	7.2	53	429	12.4	13.9	21.7
Morgan	38,000	14	16.2	340	2,397	14.2	134	526	25.5	18.0	28.3
Coshocton	37,000	10	9.1	381	5,266	7.2	168	775	21.7	12.8	30.6
Athens	33,000	10	10.0	239	2,701	8.8	104	741	14.0	21.5	30.3
Monroe	31,000	10	9.0	173	2,050	8.4	32	227	14.1	10.0	15.6

<sup>\*</sup>Lands open to public hunting that are owned or administered by the ODNR or U.S. Forest Service (Wayne National Forest), rounded to the nearest 1,000 acres.

#### Deer Age Structure

In 2018, Division of Wildlife personnel aged 4,910 deer during the weeklong gun season, just over 8% of the reported harvest. Data was collected from 48 processors in 39 counties as well as from two inspection stations in the Disease Surveillance Area of Holmes and Tuscarawas counties. Figure 6 shows how the age structure of the antlered harvest has changed over time. The proportion of yearlings in the antlered buck harvest has been steadily declining since the late 1990s. In the early to mid-1980s, nearly 70% of the bucks harvested were yearlings. Today, that percentage is below 40%. A reduction of this magnitude would

Figure 6. Statewide trends in antlered buck age structure based on a sample of the gun season harvest, 1980 – 2018.



normally be a result of some type of regulation change, such as antler point restrictions. In Ohio's case, the decline in yearling buck harvest is likely due to at least two factors. Most importantly, Ohio hunters seem to be aware of the benefits of allowing bucks to mature, and have acted on their own self-imposed restrictions. Second, the growth of the deer herd over time, coupled with liberal antlerless harvest opportunities, likely reduced the pressure on the antlered segment of the population.

# **HUNTER SUCCESS, PARTICIPATION, AND EFFORT**

In the 2018-19 season, 196,131 resident adults purchased at least one either-sex or antierless-only permit and 66,886 harvested at least one deer, resulting in a 34% hunter success rate (Table 7, Figure 7). Hunter success rates differed markedly on public and private land. Just over one-third of private land hunters were successful, as compared to only 14% of public land hunters. Because our deer hunter surveys are limited to resident adult hunters, rates may be different for nonresident hunters, as well as youth, disabled veterans, free and reduced cost seniors, and landowners.

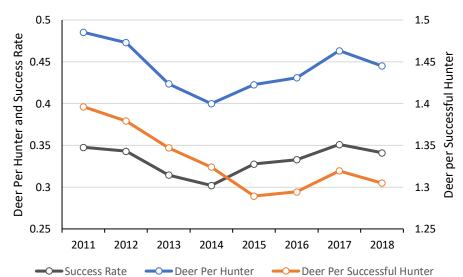
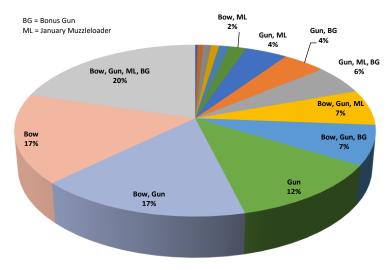


Figure 7. Success rate and average number of deer per hunter and per successful hunter, 2011-2018.

During the 2018-19 season, 71% of hunters bowhunted, while 78%, 40% and 41% reported hunting in the gun, bonus gun, and muzzleloader seasons, respectively (Table 7; Figure 8). Hunter effort has remained relatively constant since 2001, though the average number of days hunted seems to have dipped slightly in recent years. During the 2018-19 season, archery, gun, and muzzleloader hunters spent, on average, 15.4, 3.4, and 2.1 days hunting those seasons, with hunters averaging 15.1 days in the field over the course of the entire season (Table 8). Roughly one in five gun hunters reported a deer harvest and archery hunters posted a success rate of nearly 25% (Table 7). When considering success rates, it is important to remember that success in any particular season is very much dependent upon success in other seasons. Approximately 70% of gun hunters are also bow hunters that likely hunt prior to the gun season. Because most hunters participate in multiple seasons and many choose to hunt bucks only, season-specific success rates have limited value and certainly cannot be compared with other states where hunters have

Figure 8. Season-specific hunter participation rates based on results of the 2018-19 deer hunter survey.



season-specific permits. Additionally, these estimates are derived from surveys of adult, resident hunters that purchased a deer permit. Therefore, season participation and success rates of nonresidents, youth, disabled veterans, seniors, and landowners are currently unknown.

Table 7. Participation and success rates for resident adult hunters on public and private land for the 2017-18 and 2018-19 deer seasons.

	P	articipation	Rate	Estimate	ed Number of	Hunters	Number	of Successfu	l Hunters	Sı	uccess Rate	(%)
	2017	2018	% Change	2017	2018	% Change	2017	2018	% Change	2017	2018	% Change
Total				206,170	196,131 <sup>1</sup>	-4.9	72,383	66,886²	-7.6	35.1	34.1 <sup>3</sup>	-2.9
Private				195,044	184,432 <sup>4</sup>	-5.4	64,829	61,699	-4.8	33.2	33.5	0.6
Public				57,673	46,796 <sup>5</sup>	-18.9	9,415	6,670	-29.2	16.3	14.3	-12.7
Archery	0.75	0.716	-5.3	155,484	140,094 <sup>7</sup>	-9.9	34,313	34,362	0.1	22.1	24.5	11.1
Gun	0.81	0.78	-4.1	167,356	152,725	-8.7	33,784	28,339	-16.1	20.2	18.6	-8.1
Bonus Gun	0.43	0.40	-5.8	88,130	79,004	-10.4	7,570	5,165	-31.8	8.6	6.5	-23.9
Muzzleloader	0.35	0.41	16.8	71,920	79,922	11.1	6,693	7,428	11.0	9.3	9.3	-0.1

<sup>&</sup>lt;sup>1</sup> The number of adult resident hunters who purchased at least one deer permit during the 2018-19 season. Excludes non-residents, youth, seniors, disabled veterans, and landowners.

<sup>&</sup>lt;sup>2</sup>The number of adult resident hunters that reported harvesting at least one deer during the 2018-19 season.

<sup>&</sup>lt;sup>3</sup>The number of successful adult resident hunters divided by the total number of adult resident hunters that purchased a deer permit.

<sup>&</sup>lt;sup>4</sup>Among respondents to the 2018-19 deer hunter survey, 94% indicated that they hunted at least once on private land during the season. This rate is applied to the known number of licensed adult hunters to estimate the total number of hunters hunting private land at least once during the 2018-19 season.

<sup>&</sup>lt;sup>5</sup>Among respondents to the 2018-19 deer hunter survey, 23.9% indicated that they hunted at least once on public land during the season. This rate is applied to the known number of licensed adult hunters to estimate the total number of hunters hunting public land at least once during the 2018-19 season.

<sup>&</sup>lt;sup>6</sup>Among respondents to the 2018-19 deer hunter survey, 71% indicated that they hunted at least one day during the 2018-19 archery season.

<sup>&</sup>lt;sup>7</sup>Estimated total number of licensed resident adults that hunted during the 2018-19 archery season. Estimate is based on an 71% participation rate among the 196,131 resident adults who purchased at least one deer permit during the 2018-19 deer season.

Table 8. Average number of days spent hunting in 2001, 2011-13, and 2015-18 deer seasons.

	2001	2011	2012	2013	2015	2016	2017	2018
Archery	20.8	19.3	19.2	19.7	20.3	17.0	16.3	15.4
Gun	3.8	4.0	3.9	3.7	3.7	3.5	3.5	3.4
Bonus Gun	-	1.6	1.5	-	1.6	1.5	1.5	1.5
Muzzleloader	2.8	2.4	2.2	2.0	2.1	2.1	2.1	2.1
All Seasons	17.3	19.9	20.0	19.7	20.3	18.0	16.6	15.1

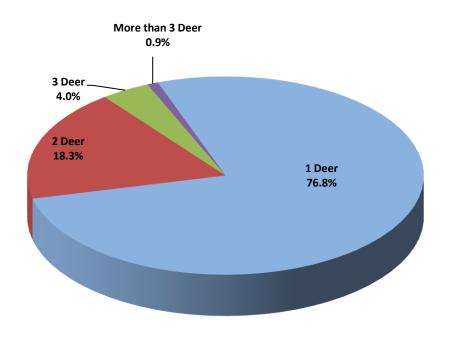
From 2011 to 2014, there was a steady decline in the number of deer taken per hunter. In 2011, 243,126 resident adults harvested 117,988 deer, or 0.49 deer per hunter. This figure declined to 0.47 in 2012, 0.42 in 2013, and in 2014 there were 0.40 deer harvested per resident adult. However, this trend began to reverse in 2015 increasing to 0.45 deer harvested per hunter in 2018. Similarly, there was a steady decline in the number of deer taken by successful hunters from a high of 1.40 in 2011 to a low of 1.29 in 2015. Slight increases have occurred since, with successful hunters taking 1.31 deer in 2018 (Figure 7).

A little more than a decade ago, in spite of large deer populations and liberal bag limits, only 18% of successful hunters harvested more than one deer during the 2006 season. This changed dramatically with the introduction of the \$15 antlerless permit in 2007. From 2007 to 2011, there was a steady increase in the percentage of successful hunters harvesting more than one deer, peaking at 27% in 2011. Then, as deer populations were reduced and restrictions were placed on the use of the antlerless deer permit, the proportion of hunters taking more than one deer steadily declined, reaching 22% in 2016. Not surprisingly, given that all significant measures of the deer population indicate herd growth has occurred recently, the proportion of hunters harvesting more than a single deer increased to 23% in 2017. Of important note is the fact that statewide bag limits have little impact on both the number of deer harvested per hunter and the percentage of hunters harvesting multiple deer. For example, in 2012 the statewide bag limit was 18 deer. That

year, successful hunters averaged 1.40 deer and only 27% reported harvesting more than one. The following year, the statewide bag limit was reduced by 50% to nine deer, yet the proportion of hunters bagging multiple deer and the average number of deer harvested dropped by just 3%.

As in years past, the vast majority of successful hunters (77%) harvested only a single deer in the 2018-19 season. Just over 18% of successful hunters bagged two deer, 4% harvested three, and less than 1.0% took four or more deer (Figure 9). Again, to emphasize the limited influence of a large bag limit, less than 1% of successful hunters harvest more than three deer in a single season, and specifically in 2018, only 86 of the 196,131 permit buyers (0.04%, or about one out of every 2,500 hunters) filled their 6-deer bag limit.

Figure 9. Percent of successful hunters taking one, two, three, or more than three deer during the 2018-19 season.



# **DISEASE UPDATE**

#### **Chronic Wasting Disease**

Chronic Wasting Disease (CWD) is a fatal disease of the central nervous system of mule deer, white-tailed deer, elk, moose, and reindeer. CWD is caused by abnormal proteins, or prions (not a bacteria or virus), that ultimately destroy brain tissue. This type of disease is known as a transmissible spongiform encephalopathy. This family of diseases includes bovine spongiform encephalopathy (mad cow disease), scrapie in sheep, and Creutzfeldt-Jakob Disease in humans.

Since 2002 the Division of Wildlife has conducted statewide CWD surveillance, testing 20,141 deer. To date, there has yet to be a wild, free-ranging deer test positive for the disease in Ohio. In 2018, a total of 2,648 deer were submitted for CWD testing. Division of Wildlife staff collected 894 road-killed deer from 59 counties and hunters submitted (directly or via taxidermist/processor) 1,673 deer (10 of which were escaped captive deer) for CWD testing. An additional 14 escaped or confiscated captive cervids, 27 deer displaying abnormal behavior and/or poor physical condition, 5 found dead under suspicious circumstances, 25 removed in conflict situations, and 10 others were tested for CWD in 2018. CWD was not detected in any of these samples.

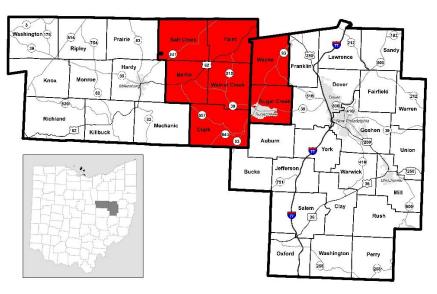
#### **Disease Surveillance Area**

In October 2014, a mature buck from a shooting preserve in Holmes County tested positive for CWD, becoming the first-ever CWD-positive deer in Ohio. The shooting preserve was depopulated in April 2015, and testing revealed no additional CWD-positive animals. Subsequent testing of nearly 300 free-ranging deer in an eight-township area around the shooting preserve failed to detect any CWD-positive deer as well. However, in spring of 2015, two more CWD-positive deer were reported from a captive white-tailed deer breeding pen in Holmes County. This herd was

depopulated in June 2015, and 16 additional deer tested positive for the disease, bringing the total of CWD-positive animals found in Ohio to 19 (all in captive herds). In response to these findings, the Division of Wildlife conducted targeted surveillance in the immediate vicinity of the infected facility during the summer of 2015. Staff collected 18 deer, including two that had escaped from captive facilities, with none testing positive for CWD.

Additionally, the focus area in 2015 was expanded to include two townships in southern Wayne County, and the 10-township focus area was declared a Disease Surveillance Area (DSA, visit wildohio.gov for specific regulations pertaining to a DSA). The 10-township DSA in central Holmes and southern Wayne counties expired on July 31, 2018 after three seasons of intensive surveillance revealed no CWD positive animals in the wild herd. However, due to the early 2018 discovery of three additional CWD-positives in an eastern Holmes County captive facility, a new, 7-township DSA was established (Figure 10). During the 2018-19 season, 198 deer (all hunter-harvested) from DSA 2018-01 were tested for CWD. All but two of these were collected at inspection stations during Ohio's three firearms seasons (n=13 days). Again, CWD was not detected in any of the deer tested.

Figure 10. Disease Surveillance Area 2018-01 (DSA)



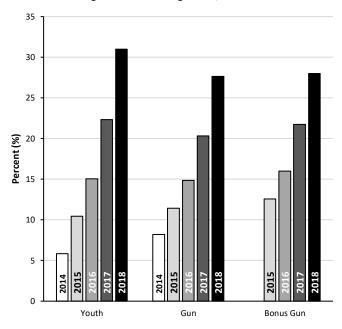
Disease Surveillance Area 2018\_01

Effective Date: August 1, 2018

# **LOOKING BACK**

The 2018-19 season marked the fifth year that straight-walled cartridge (SWC) calibers were legal for deer hunting. Hunters harvested 2,041, 16,760, and 2,698 deer with SWC rifles during the youth, gun and bonus gun seasons, respectively, accounting for 31%, 28% and 28% of the total reported harvest during those seasons. The proportion of the harvest taken with SWC rifles has increased each year since the 2014 season when they were first legalized for deer hunting (Figure 11). According to the results of the 2018-19 Deer Hunter Effort and Harvest Survey, the majority of hunters (54%) still used a shotgun during the traditional seven-day gun season, 14% used a muzzleloader, and 29% used a SWC rifle. The .45-70 was the most popular choice among hunters, with 45% opting for this caliber. Other popular choices included the .44 Magnum (17%), .450 Bushmaster (14%), and .444 Marlin (12%).

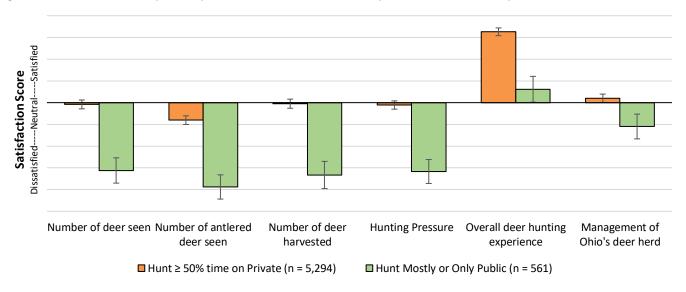
Figure 11. Proportion of youth, gun, and bonus gun season harvest taken with straight-walled cartridge rifles, 2014-2018.



## **Public land regulations**

The only significant harvest regulation change made for the 2018-19 season was for public hunting areas (defined in Ohio Administrative Code, 1501:31-15-04, as the areas listed at wildohio.gov). The regulations were: 1) a statewide limit of one antlerless deer on public hunting areas, and 2) no antlerless deer after the close of the 7-day gun season (remainder of season was buck-only). This regulation change was due to the feedback received from deer hunter surveys over the past several years. In a 2015-16 survey, nearly two-thirds of those that self-identified as hunting mostly or exclusively public land indicated support for reducing antlerless harvest on public lands to encourage herd growth. Additionally, when compared to the general population of resident deer hunters, those hunting public land have reported much lower satisfaction for various aspects of their hunting experience (Figure 12).





Due to several factors that likely depressed the 2018-19 harvest, it is difficult to isolate the true impact of the new public land regulations in the 2018-19 season. For reasons not completely understood, the antiered harvest (4,994) was 21% lower than the previous 3-year average (6,353). All else being equal, a similar decline in the antierless harvest would have been expected in the absence of regulation changes. The antierless harvest in 2018-19 (5,868) was 44% lower than the previous 3-year average (10,425). An impact of this magnitude serves as evidence that the regulations were an effective means of reducing the antierless harvest. These public land regulations will remain in effect for the 2019-20 season and the Division of Wildlife will continue to monitor harvest trends, population response, and hunter attitudes to inform future management decisions.

## 2019-20 SEASON PREVIEW

The Division of Wildlife remains committed to providing quality deer now and into the future. To accomplish this, hunters must harvest an adequate number of does each year to maintain the herd at a level that is not only socially acceptable to most, but that the habitat is capable of supporting in good to excellent condition. In the mid- to late-2000s, deer populations across most of the state had reached record-highs - well above population goals that had been established in 2000. Through a combination of liberal bag limits, reduced cost antierless permits, and other programmatic changes, including education on the importance of an adequate doe harvest, populations in most areas of the state were reduced to, or very near, goal by 2014. Starting in 2013, regulations became increasingly conservative to alleviate harvest pressure on antierless deer and stabilize populations. Predictably, the results of the 2015 population goal setting process indicated that most areas of the state could tolerate moderate herd growth (see *Population Goal Setting Surveys* on page 16 for more information), and, consistent with these desires, data indicate that deer populations in most areas of the state are increasing.

Season dates, aside from minor calendar adjustments, and county bag limits will remain the same for the 2019-2020 season. In addition to the moderate growth in the deer population that has occurred in recent years, hunters across much of the state in 2019 could also witness some increases in deer observations and success due to carry-over. Several environmental variables (namely the poor weather on historically high-harvest days) contributed to a lower than expected harvest in 2018. Considering the low mortality rates experienced outside of hunting season, those "extra" deer that survived the 2018 season should be available for harvest in the 2019 season.

# **HUNTER FEEDBACK**

Each year since 2011, and periodically over the last several decades, the Division of Wildlife has sent surveys to a random sample of adult resident deer permit buyers. These surveys are designed to not only gather important information about season participation, hunting effort, and deer observations, but to also seek hunters' opinions on important deer management issues. In 2018, survey invitations were successfully delivered via email to 9,595 randomly selected, resident deer permit buyers. While 1,239 hunters (13%) answered at least one survey question, only 933 hunters completed the survey - a response rate of 10%.

Survey results have been used in combination with permit sales and annual harvest data to inform decision makers during the regulation setting process. Additionally, many hunters find survey results interesting and have asked for a summary of our findings. Therefore, this section of the annual harvest summary is dedicated to annual hunter survey results. Our hope is this will not only be interesting and informative, but to also serve as an incentive for hunters to return their survey should they receive one in the future.

## **Deer Hunter Opinions and Satisfaction**

Measuring hunter attitudes and opinions is a critical component of evaluating Ohio's deer program. While not only useful to ensure hunters are satisfied with various aspects of their deer hunting experience, the number of deer observed or otherwise perceived to be on the landscape appears to be the primary driver of hunter satisfaction - in essence, tracking hunter attitudes over time can serve as a proxy for tracking deer population size. According to population indices (Figure 16), deer populations hit a recent low in 2014 and have been gradually increasing since. Likewise, hunter surveys since 2015 mirror this trend with decreases in the proportion of hunters reporting "too few deer" when asked their opinion of the deer herd in the area hunted most often (Figure 13). In the 2015 annual deer hunter survey, nearly 57% of hunters reported too few deer and only 37% reported that the number of deer in their area was just about right. Fast forward to 2018, and survey results show that only 42% of hunters feel the deer population is too low and almost half (48%) think that there are just about the right number of deer on the landscape.

Similarly, hunters have reported steady increases in various measures of satisfaction related to number of deer seen, overall deer hunting experience, and management of Ohio's deer herd (Figure 14). In 2015, 40% of hunters claimed they were at least somewhat satisfied with the number of deer seen, 61% were

Figure 13. Proportion of hunters reporting "too few deer" and "just about the right number of deer" over four years of deer hunter surveys, 2015-2018.

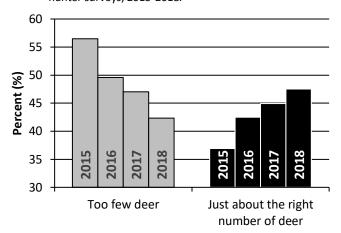
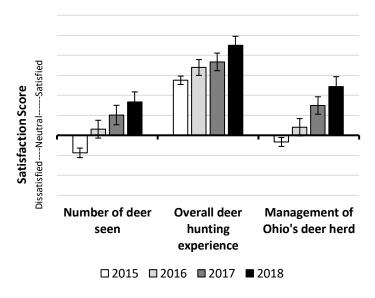


Figure 14. Satisfaction scores of deer hunters, 2015-2018.



satisfied with their overall deer hunting experience, and 36% had a favorable opinion of the management of Ohio's deer herd. With apparent growth in the deer population since that time, 2018 survey results show that the proportion of hunters with a favorable opinion of deer numbers jumped to 52%, satisfaction with their deer hunting experience increased to 70%, and 50% of hunters gave the Division of Wildlife a favorable rating regarding the management of Ohio's deer herd (Table 9).

Table 9. Proportion of hunters reporting satisfaction or dissatisfaction with deer numbers, overall deer hunting experience, and the management of Ohio's deer herd according to 2015 and 2018 annual deer hunter surveys.

	% Satisfi Somewhat				
	2015 2018				
Deer numbers	40.1	51.6			
Overall deer hunting experience	60.9	70.0			
Management of Ohio's deer herd	36.4	49.9			

70 2 1000	tisfied or Dissatisfied
2015	2018
51.4	35.8
24.9	20.0
38.7	24.6

#### **Population Goal Setting Surveys**

Deer population goals were revised in the fall of 2015. Historically, this process has involved only rural landowners and farmers. However, deer hunter opinions were also considered in this most recent survey. Both production landowners and hunters were asked to answer the same question: *In the area that you hunt/farm, are there too many, too few, or just about the right number of deer?* The Division of Wildlife sent 18,500 surveys to a randomly selected group of deer permit buyers and received 6,712 useable responses, for roughly a 36% response rate. Statewide, 50% of hunters reported *too few,* 5% reported *too many,* and 40% of hunters said that the deer population in the area they hunt the most was just about right. Surveys were also mailed to a random sample of almost 17,000 production landowners. Nearly 10,000 of these were returned for a 60% response rate. Statewide, 29% of farmers believed there to be too many deer, 14% reported too few, and 50% said that the deer population was just about right. Considering the opinions of both groups, our plans were to manage for moderate herd growth in most parts of the state. Another survey will be conducted in 2019 to determine the impact of recent herd increases on hunter and farmer opinions.

Figure 15 provides a regional perspective on the desired management direction of deer populations. For much of the state, opinions of both groups suggested room for moderate herd growth (shaded light green in Figure 15), with an average of 28% of farmers and 48% of hunters reporting "too many" and "too few" deer, respectively. Alternatively, differences among the two survey groups pointed to room for more substantial herd growth in the northeast corner of the state as well as in some of the more agricultural portions of western Ohio, with an average of 23% of farmers and 58% of hunters reporting "too many" and "too few" deer, respectively in these regions.

Management
Direction
Stabilize
Moderate Increase
Management
Stabilize
Moderate Increase

Direction
Management
Direction
Stabilize
Moderate Increase

Moderate Increas

Figure 15. Regional deer management direction derived from surveys of production landowners and hunters in 2015. Average responses for each region are provided in the legend.

23

58

Increase

# UNDERSTANDING POPULATION TRENDS

While the Division of Wildlife does not routinely count deer, several trends that reflect changes in the size of the deer population are monitored annually. Some of the trends used include: the number of bucks harvested, carcasses removed from roadways, deer seen per hour, and number of days to harvest a deer. Rather than direct population estimates, each of these measures serve as an index to the size of the population. In other words, they change when the deer population changes. Contrary to popular belief, biologists do not need to know exactly how many deer are on the landscape to properly manage the population. Rather, determining 1) whether the population is stable, increasing, or decreasing, and 2) whether its current trajectory is in agreement with population objectives are key to making harvest management decisions. These indices provide this valuable information.

Though the annual buck harvest has been used as the primary index of deer population size, a host of variables can influence the number of bucks harvested each year. Crop harvest timing, mast availability, and weather on traditionally high harvest days (opening day of gun season) can certainly impact harvest. Using the annual buck harvest as an index to population size also assumes that hunter participation, effort, and selectivity is relatively constant from year to year. Unfortunately, as hunter numbers continue to decline, we have had to develop a buck harvest index that accounts for the annual decline in hunting pressure. Additionally, we rely heavily on annual hunter surveys. In the annual Deer Hunter Effort and Harvest Survey hunters provide information regarding their effort (number of days hunted), harvest, and opinions of the deer population in the area they hunt. Finally, participants in the annual Bowhunter Survey record time spent hunting and number of deer seen on each hunting trip. Collectively these data allow biologists to determine if the population is stable, growing, or declining and, most importantly, determine if trends are consistent with direction provided by the results of population goal setting surveys (see *Population Goal Setting Surveys* on page 16). Figure 16 illustrates general consistency in direction for the different indices that are used to monitor population trends.

If you would like to take an active role in the management of Ohio's deer herd, we encourage anyone interested in participating in the annual Bowhunter Survey to contact us by phone at 1-800-WILDLIFE (1-800-945-3543) or via email at wildinfo@dnr.state.oh.us.

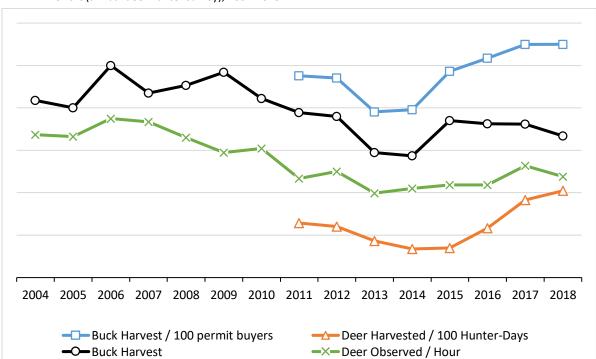


Figure 16. Statewide deer population trends based on reported buck harvest, buck harvest per permit buyer, deer observed per hour of bowhunting (annual bowhunter survey), and deer harvested per 100 days of hunting effort (annual deer hunter survey), 2004-2018.

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	379	478	-20.7	505	673	73	125	957	1,276	-25.0
	Crossbow	453	479	-5.4	366	404	54	62	873	945	-7.7
	Vertical Bow	313	390	-19.7	196	289	28	44	537	722	-25.7
Adams	Bonus Gun	45	55	-18.7	84	111	3	17	132	183	-28.0
	Muzzleloader	99	88	12.5	162	153	23	22	284	263	7.8
	Youth	101	83	21.7	35	43	9	12	145	138	5.1
	Total	1,397	1,584	-11.8	1,356	1,686	191	284	2,944	3,553	-17.1
	Gun	98	138	-29.2	118	175	34	50	250	363	-31.2
	Crossbow	146	145	0.9	124	149	35	46	305	339	-10.1
	Vertical Bow	90	84	7.1	69	89	9	23	168	196	-14.1
Allen	Bonus Gun	18	16	10.2	28	22	9	9	55	47	16.2
	Muzzleloader	15	23	-35.7	31	21	10	6	56	51	10.5
	Youth	17	17	2.0	13	12	5	5	35	34	2.9
	Total	389	427	-8.9	387	474	102	139	878	1,040	-15.6
	Gun	381	428	-11.0	573	664	168	179	1,122	1,271	-11.7
	Crossbow	401	351	14.4	335	323	67	80	803	754	6.5
	Vertical Bow	171	215	-20.5	205	239	17	34	393	488	-19.5
Ashland	Bonus Gun	54	59	-8.0	123	118	19	29	196	206	-5.0
	Muzzleloader	75	58	30.1	167	136	36	29	278	223	24.7
	Youth	71	55	29.1	50	44	12	11	133	111	20.2
	Total	1,161	1,172	-1.0	1,469	1,538	323	367	2,953	3,078	-4.1
	Gun	607	618	-1.8	1,096	1,087	324	307	2,027	2,012	0.7
	Crossbow	592	573	3.4	684	667	171	177	1,447	1,417	2.1
	Vertical Bow	177	251	-29.6	284	313	70	72	531	637	-16.6
Ashtabula	Bonus Gun	101	98	3.4	210	233	57	72	368	403	-8.7
	Muzzleloader	78	78	0.4	176	210	56	62	310	350	-11.4
	Youth	78	48	61.4	56	52	21	22	155	122	26.7
	Total	1,648	1,679	-1.8	2,523	2,586	713	721	4,884	4,987	-2.1
	Gun	528	611	-13.6	677	798	117	134	1,322	1,543	-14.3
	Crossbow	490	482	1.7	301	276	38	41	829	799	3.8
	Vertical Bow	354	410	-13.7	232	257	26	33	612	700	-12.6
Athens	Bonus Gun	61	68	-10.3	102	125	7	16	170	209	-18.5
	Muzzleloader	111	118	-6.2	220	231	28	34	359	384	-6.4
	Youth	91	72	27.0	37	38	5	14	133	123	7.8
	Total	1,644	1,771	-7.2	1,575	1,740	223	275	3,442	3,786	-9.1

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County			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	102	112	-8.9	131	139	35	48	268	300	-10.6
	Crossbow	107	104	2.9	112	101	38	23	257	228	12.7
	Vertical Bow	55	61	-9.8	57	67	11	15	123	143	-14.2
Auglaize	Bonus Gun	24	14	71.4	32	24	10	4	66	42	55.9
	Muzzleloader	21	16	34.0	34	28	6	8	61	51	18.8
	Youth	16	15	4.3	15	16	7	5	38	36	6.5
	Total	329	325	1.2	386	380	109	104	824	809	1.9
	Gun	494	548	-9.8	501	707	87	113	1,082	1,368	-20.9
	Crossbow	420	390	7.6	237	248	20	34	677	673	0.6
	Vertical Bow	178	200	-11.1	115	131	15	13	308	344	-10.6
Belmont	Bonus Gun	61	72	-15.7	65	140	9	22	135	234	-42.4
	Muzzleloader	91	96	-5.5	141	194	22	37	254	327	-22.3
	Youth	94	96	-2.1	32	47	10	9	136	152	-10.5
	Total	1,347	1,412	-4.6	1,103	1,483	165	229	2,615	3,124	-16.3
	Gun	259	356	-27.2	412	514	67	99	738	968	-23.8
	Crossbow	333	301	10.6	285	269	47	36	665	606	9.8
	Vertical Bow	205	263	-22.0	181	253	21	31	407	546	-25.5
Brown	Bonus Gun	41	46	-10.2	62	90	13	17	116	152	-23.9
	Muzzleloader	72	61	18.0	141	125	22	18	235	204	15.2
	Youth	44	45	-2.9	34	25	8	6	86	76	12.7
	Total	965	1,082	-10.8	1,123	1,284	181	208	2,269	2,574	-11.9
	Gun	117	136	-13.8	105	151	27	39	249	325	-23.5
	Crossbow	256	247	3.5	228	213	38	47	522	507	3.0
	Vertical Bow	145	173	-16.3	133	146	29	27	307	346	-11.3
Butler	Bonus Gun	15	17	-10.0	29	27	5	5	49	49	0.7
	Muzzleloader	32	28	12.9	53	46	13	5	98	80	22.5
	Youth	24	12	94.6	9	6	3	3	36	21	68.8
	Total	590	618	-4.5	564	594	116	126	1,270	1,338	-5.1
	Gun	524	592	-11.4	737	819	190	189	1,451	1,599	-9.3
	Crossbow	458	441	3.9	362	336	69	62	889	839	5.9
	Vertical Bow	195	247	-21.2	177	191	24	26	396	464	-14.7
Carroll	Bonus Gun	73	74	-1.8	134	156	17	39	224	269	-16.6
	Muzzleloader	100	95	4.9	228	214	35	42	363	351	3.5
	Youth	64	73	-12.3	30	41	17	20	111	134	-17.0
	Total	1,424	1,535	-7.3	1,687	1,777	354	381	3,465	3,693	-6.2

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	160	159	0.6	147	195	30	48	337	401	-16.0
	Crossbow	171	167	2.4	152	143	30	30	353	340	3.7
	Vertical Bow	105	137	-23.2	86	118	25	24	216	278	-22.3
Champaign	Bonus Gun	22	14	57.1	24	32	4	5	50	52	-3.2
	Muzzleloader	33	25	33.8	48	36	11	7	92	68	35.3
	Youth	33	23	45.6	15	9	5	4	53	35	50.0
	Total	529	529	0.0	474	539	109	118	1,112	1,186	-6.2
	Gun	82	87	-5.4	76	84	19	25	177	196	-9.7
	Crossbow	144	121	19.3	131	91	15	17	290	229	26.5
	Vertical Bow	71	86	-17.8	74	81	8	12	153	179	-14.7
Clark	Bonus Gun	18	12	50.0	13	15	1	4	32	31	3.2
	Muzzleloader	24	15	63.6	32	24	4	5	60	43	38.5
	Youth	16	10	60.0	6	3	4	2	26	15	73.3
	Total	356	335	6.3	336	302	52	65	744	702	6.0
	Gun	225	252	-10.7	278	364	47	70	550	686	-19.9
	Crossbow	407	384	5.9	378	394	77	77	862	855	0.9
	Vertical Bow	232	286	-19.0	263	344	29	44	524	674	-22.3
Clermont	Bonus Gun	36	30	18.7	57	65	2	15	95	111	-14.2
	Muzzleloader	62	47	31.9	102	85	14	18	178	150	18.7
	Youth	37	31	20.7	19	18	11	3	67	51	30.5
	Total	1,009	1,036	-2.6	1,105	1,281	181	228	2,295	2,545	-9.8
	Gun	70	118	-40.8	91	133	24	34	185	285	-35.0
	Crossbow	111	99	12.5	87	74	19	19	217	192	13.2
	Vertical Bow	63	82	-23.5	66	64	12	10	141	156	-9.6
Clinton	Bonus Gun	17	16	8.5	22	25	2	3	41	44	-6.1
	Muzzleloader	15	21	-29.7	43	32	9	9	67	62	7.5
	Youth	23	15	56.8	8	11	8	3	39	29	36.0
	Total	302	354	-14.6	323	340	77	79	702	773	-9.1
	Gun	445	495	-10.1	557	697	130	174	1,132	1,367	-17.2
	Crossbow	413	418	-1.2	323	334	68	73	804	825	-2.6
	Vertical Bow	173	191	-9.6	133	168	29	29	335	388	-13.7
Columbiana	Bonus Gun	65	74	-12.2	87	140	13	37	165	251	-34.2
	Muzzleloader	70	72	-2.8	140	160	30	37	240	269	-10.9
	Youth	44	53	-17.5	31	40	9	17	84	110	-23.6
	Total	1,218	1,316	-7.4	1,289	1,560	281	373	2,788	3,248	-14.2

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	726	844	-13.9	1,182	1,321	267	270	2,175	2,434	-10.7
	Crossbow	898	777	15.6	807	613	117	118	1,822	1,508	20.8
	Vertical Bow	463	516	-10.3	427	386	65	58	955	961	-0.6
Coshocton	Bonus Gun	79	86	-8.1	142	217	40	52	261	355	-26.4
	Muzzleloader	126	150	-15.8	318	292	41	59	485	501	-3.3
	Youth	158	120	31.7	102	80	28	34	288	234	23.1
	Total	2,473	2,518	-1.8	3,005	2,947	563	598	6,041	6,063	-0.4
	Gun	210	232	-9.6	219	272	67	81	496	585	-15.3
	Crossbow	135	139	-3.1	119	110	19	25	273	274	-0.4
	Vertical Bow	70	66	6.6	52	64	9	8	131	138	-5.1
Crawford	Bonus Gun	23	22	4.5	43	41	16	10	82	73	12.3
	Muzzleloader	20	14	42.9	63	31	10	6	93	51	82.4
	Youth	21	16	31.3	10	15	8	5	39	35	10.4
	Total	480	493	-2.7	509	536	133	137	1,122	1,167	-3.8
	Gun	17	16	6.3	20	27	2	6	39	48	-19.3
	Crossbow	189	213	-11.1	377	378	58	67	624	658	-5.1
	Vertical Bow	61	80	-23.4	173	166	25	32	259	278	-6.8
Cuyahoga	Bonus Gun	2	1	200.0	2	1	1	1	5	3	87.5
	Muzzleloader	0	1	-100	0	1	1	1	1	2	-57.1
	Youth	1	0	-	0	0	0	0	1	0	-
	Total	270	310	-12.9	572	574	87	106	929	990	-6.2
	Gun	87	110	-20.7	103	132	25	40	215	282	-23.8
	Crossbow	115	83	38.6	76	88	23	23	214	193	10.7
	Vertical Bow	63	68	-7.4	45	66	12	16	120	149	-19.6
Darke	Bonus Gun	18	10	74.2	24	13	7	6	49	29	70.9
	Muzzleloader	17	11	50.0	31	18	6	4	54	33	63.6
	Youth	12	10	16.1	14	9	1	3	27	22	20.9
	Total	314	296	6.2	297	328	76	92	687	716	-4.1
	Gun	241	286	-15.6	264	392	77	116	582	794	-26.7
	Crossbow	194	155	25.2	163	170	40	47	397	372	6.8
	Vertical Bow	79	96	-17.7	87	115	15	23	181	234	-22.6
Defiance	Bonus Gun	64	35	81.1	100	65	30	15	194	115	69.2
	Muzzleloader	46	22	112.3	88	51	13	16	147	89	65.2
	Youth	36	27	35.0	20	24	11	10	67	61	10.4
	Total	669	626	6.9	729	826	189	229	1,587	1,681	-5.6

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	153	177	-13.6	160	211	39	55	352	443	-20.5
	Crossbow	234	237	-1.4	229	248	40	56	503	541	-7.1
	Vertical Bow	164	177	-7.2	163	223	30	35	357	435	-17.9
Delaware	Bonus Gun	23	22	3.0	36	31	12	10	71	63	12.1
	Muzzleloader	25	19	31.6	43	43	11	9	79	71	10.7
	Youth	19	14	32.6	7	10	5	4	31	28	10.7
	Total	622	652	-4.6	643	773	141	170	1,406	1,595	-11.8
	Gun	83	89	-6.7	119	104	20	30	222	223	-0.4
	Crossbow	150	161	-7.0	135	133	27	31	312	325	-3.9
	Vertical Bow	54	57	-4.7	62	48	8	10	124	114	8.5
Erie	Bonus Gun	15	13	15.4	34	22	9	4	58	39	48.7
	Muzzleloader	19	7	159.1	19	18	5	5	43	30	43.3
	Youth	30	25	21.6	43	20	10	9	83	53	55.6
	Total	391	385	1.5	508	412	118	115	1,017	912	11.5
	Gun	252	294	-14.4	288	361	79	82	619	738	-16.1
	Crossbow	279	259	7.7	196	188	39	42	514	489	5.2
	Vertical Bow	174	189	-8.1	157	152	22	25	353	366	-3.6
Fairfield	Bonus Gun	30	33	-10.0	46	55	9	14	85	102	-16.4
	Muzzleloader	47	37	25.9	78	84	19	14	144	135	6.7
	Youth	37	33	13.3	20	23	5	8	62	64	-2.6
	Total	825	852	-3.1	794	870	174	186	1,793	1,908	-6.0
	Gun	48	60	-20.4	35	53	8	11	91	124	-26.8
	Crossbow	53	49	8.9	30	25	4	7	87	81	7.9
	Vertical Bow	21	42	-49.6	15	20	5	5	41	67	-38.5
Fayette	Bonus Gun	9	7	22.7	8	7	1	2	18	16	10.2
	Muzzleloader	15	8	80.0	12	9	7	0	34	18	88.9
	Youth	9	10	-10.0	2	3	3	2	14	15	-6.7
	Total	158	178	-11.2	102	120	28	27	288	325	-11.4
	Gun	71	54	31.5	52	78	18	16	141	148	-4.7
	Crossbow	167	149	11.8	141	164	30	30	338	343	-1.5
	Vertical Bow	90	107	-15.9	82	130	17	16	189	253	-25.4
Franklin	Bonus Gun	0	6	-100	8	17	2	4	10	27	-63.4
	Muzzleloader	9	7	22.7	25	17	3	4	37	28	32.1
	Youth	8	4	118.2	1	4	2	1	11	8	32.0
	Total	347	331	4.9	314	411	72	72	733	814	-10.0

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	129	150	-13.8	132	153	31	45	292	348	-16.0
	Crossbow	92	108	-15.1	73	84	18	23	183	216	-15.1
	Vertical Bow	49	54	-9.8	45	57	11	12	105	123	-14.6
Fulton	Bonus Gun	21	17	26.0	29	20	3	7	53	44	20.5
	Muzzleloader	20	9	114.3	19	16	4	7	43	32	35.8
	Youth	7	12	-40.0	5	8	6	4	18	23	-21.7
	Total	320	354	-9.5	312	339	74	98	706	791	-10.7
	Gun	466	527	-11.5	572	699	108	123	1,146	1,349	-15.1
	Crossbow	345	312	10.7	209	187	27	26	581	525	10.7
	Vertical Bow	175	212	-17.5	111	122	11	18	297	352	-15.6
Gallia	Bonus Gun	45	46	-2.2	60	95	15	15	120	157	-23.4
	Muzzleloader	71	73	-2.7	116	150	16	17	203	239	-15.2
	Youth	79	63	24.7	37	34	10	8	126	105	20.4
	Total	1,187	1,242	-4.5	1,110	1,293	190	209	2,487	2,744	-9.4
	Gun	214	197	8.4	284	240	84	71	582	508	14.6
	Crossbow	273	311	-12.3	326	308	90	98	689	717	-3.9
	Vertical Bow	123	143	-13.8	163	173	45	57	331	372	-11.1
Geauga	Bonus Gun	35	32	8.2	62	51	16	14	113	97	16.1
	Muzzleloader	19	25	-25.0	43	62	9	18	71	106	-32.8
	Youth	14	16	-14.3	22	15	6	5	42	36	15.6
	Total	686	734	-6.5	911	860	252	265	1,849	1,858	-0.5
	Gun	92	86	7.0	86	107	15	24	193	217	-11.2
	Crossbow	149	139	6.9	132	119	15	22	296	281	5.5
	Vertical Bow	97	97	0.0	73	93	14	15	184	204	-10.0
Greene	Bonus Gun	17	13	27.5	20	19	2	3	39	35	10.4
	Muzzleloader	23	16	46.8	30	26	4	7	57	49	16.3
	Youth	21	9	133.3	8	7	0	2	29	17	67.3
	Total	399	363	10.0	353	373	52	74	804	810	-0.7
	Gun	649	738	-12.0	881	1,005	199	219	1,729	1,961	-11.8
	Crossbow	632	604	4.7	473	411	100	76	1,205	1,091	10.4
	Vertical Bow	257	320	-19.7	251	236	38	36	546	592	-7.8
Guernsey	Bonus Gun	62	93	-33.6	107	162	19	35	188	290	-35.2
	Muzzleloader	115	114	1.2	280	267	39	52	434	433	0.3
	Youth	90	98	-7.8	46	63	18	19	154	180	-14.3
	Total	1,818	1,981	-8.2	2,055	2,162	415	441	4,288	4,584	-6.5

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	64	75	-15.0	70	103	12	21	146	199	-26.6
	Crossbow	304	331	-8.2	395	420	75	79	774	830	-6.7
	Vertical Bow	190	222	-14.3	297	336	50	63	537	621	-13.5
Hamilton	Bonus Gun	4	11	-64.7	15	20	2	4	21	35	-40.0
	Muzzleloader	15	11	32.4	19	24	7	3	41	38	7.0
	Youth	6	5	12.5	6	6	0	3	12	14	-12.2
	Total	585	660	-11.3	805	912	146	174	1,536	1,745	-12.0
	Gun	175	224	-21.8	165	204	63	60	403	488	-17.5
	Crossbow	156	169	-7.7	125	110	34	24	315	303	4.0
	Vertical Bow	111	129	-13.7	89	102	17	16	217	247	-12.0
Hancock	Bonus Gun	31	24	27.4	50	25	8	6	89	55	60.8
	Muzzleloader	20	16	25.0	40	29	10	8	70	53	31.3
	Youth	15	23	-35.7	15	13	5	4	35	40	-13.2
	Total	518	590	-12.2	486	487	138	121	1,142	1,197	-4.6
	Gun	134	197	-31.9	193	250	55	67	382	514	-25.7
	Crossbow	118	119	-0.6	128	124	30	31	276	273	1.0
	Vertical Bow	93	97	-4.5	107	108	21	28	221	234	-5.4
Hardin	Bonus Gun	36	27	31.7	68	33	8	12	112	72	56.3
	Muzzleloader	36	28	30.1	69	59	10	13	115	100	15.4
	Youth	28	23	20.0	8	14	6	7	42	45	-6.0
	Total	449	496	-9.5	580	593	131	159	1,160	1,248	-7.0
	Gun	456	584	-21.9	685	832	145	172	1,286	1,587	-19.0
	Crossbow	461	480	-4.0	357	330	39	54	857	864	-0.8
	Vertical Bow	208	257	-19.2	185	207	13	24	406	488	-16.8
Harrison	Bonus Gun	54	71	-23.6	98	150	23	31	175	252	-30.5
	Muzzleloader	100	101	-1.3	193	238	33	40	326	379	-14.1
	Youth	65	83	-21.7	40	43	12	14	117	140	-16.2
	Total	1,357	1,587	-14.5	1,573	1,817	268	337	3,198	3,742	-14.5
	Gun	110	156	-29.6	109	161	39	43	258	360	-28.3
	Crossbow	80	78	2.6	52	61	26	14	158	153	3.3
	Vertical Bow	53	47	13.6	31	43	11	10	95	100	-4.7
Henry	Bonus Gun	40	19	114.3	32	18	14	4	86	40	113.2
	Muzzleloader	16	8	108.7	26	17	6	1	48	25	89.5
	Youth	7	10	-32.3	10	10	2	2	19	22	-14.9
	Total	310	320	-3.2	266	313	99	75	675	708	-4.7

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	285	376	-24.1	436	565	82	128	803	1,068	-24.8
	Crossbow	284	316	-10.0	272	292	64	71	620	679	-8.6
	Vertical Bow	174	222	-21.7	173	225	34	39	381	486	-21.7
Highland	Bonus Gun	53	45	18.7	72	91	17	17	142	153	-7.0
	Muzzleloader	67	66	1.5	133	118	19	27	219	211	3.8
	Youth	60	60	-0.6	26	40	8	8	94	108	-12.7
	Total	930	1,092	-14.8	1,121	1,341	225	292	2,276	2,725	-16.5
	Gun	438	568	-22.9	572	697	104	150	1,114	1,416	-21.3
	Crossbow	430	468	-8.1	264	312	47	54	741	834	-11.1
	Vertical Bow	256	307	-16.6	175	208	19	28	450	544	-17.2
Hocking	Bonus Gun	44	61	-27.5	70	103	11	21	125	185	-32.4
	Muzzleloader	106	107	-0.6	134	204	24	38	264	348	-24.1
	Youth	60	56	7.8	19	29	5	7	84	91	-8.0
	Total	1,342	1,575	-14.8	1,242	1,567	210	299	2,794	3,441	-18.8
	Gun	438	499	-12.2	680	791	170	188	1,288	1,478	-12.8
	Crossbow	534	513	4.1	553	441	103	82	1,190	1,036	14.8
	Vertical Bow	236	284	-16.8	341	317	46	39	623	640	-2.7
Holmes	Bonus Gun	62	62	0.5	122	133	27	28	211	223	-5.4
	Muzzleloader	79	65	20.9	211	172	41	38	331	275	20.2
	Youth	131	78	68.7	86	54	20	26	237	158	50.3
	Total	1,491	1,516	-1.6	2,007	1,930	418	406	3,916	3,852	1.7
	Gun	296	366	-19.2	434	557	133	152	863	1,075	-19.7
	Crossbow	231	253	-8.6	208	213	47	49	486	515	-5.6
	Vertical Bow	143	139	2.9	122	140	18	24	283	303	-6.5
Huron	Bonus Gun	61	42	45.2	93	98	24	28	178	168	6.0
	Muzzleloader	45	33	36.4	100	72	30	22	175	127	37.8
	Youth	53	36	45.9	33	22	10	15	96	74	29.7
	Total	835	876	-4.6	1,001	1,117	264	294	2,100	2,287	-8.2
	Gun	402	460	-12.5	566	612	115	121	1,083	1,192	-9.1
	Crossbow	394	412	-4.3	338	278	41	45	773	735	5.1
	Vertical Bow	248	299	-17.0	178	187	19	23	445	509	-12.5
Jackson	Bonus Gun	43	56	-23.7	114	102	16	19	173	177	-2.4
	Muzzleloader	66	82	-19.8	141	164	29	26	236	272	-13.3
	Youth	69	63	9.5	39	34	9	13	117	110	6.4
	Total	1,225	1,377	-11.1	1,384	1,390	229	249	2,838	3,016	-5.9

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	T	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	349	425	-17.8	303	528	47	93	699	1,046	-33.2
	Crossbow	262	304	-13.7	129	184	13	24	404	511	-21.0
	Vertical Bow	163	216	-24.5	72	126	7	12	242	354	-31.6
Jefferson	Bonus Gun	31	53	-41.1	42	103	7	22	80	177	-54.9
	Muzzleloader	61	65	-6.2	92	163	11	23	164	251	-34.6
	Youth	62	57	8.8	15	27	6	9	83	92	-10.1
	Total	931	1,130	-17.6	656	1,141	91	184	1,678	2,455	-31.7
	Gun	502	668	-24.9	807	963	202	254	1,511	1,885	-19.9
	Crossbow	537	523	2.7	538	489	113	95	1,188	1,107	7.3
	Vertical Bow	337	359	-6.1	334	355	41	61	712	775	-8.1
Knox	Bonus Gun	64	74	-13.1	127	146	36	35	227	254	-10.7
	Muzzleloader	89	86	3.1	256	195	52	44	397	326	21.9
	Youth	102	75	36.6	58	55	25	20	185	150	23.3
	Total	1,650	1,801	-8.4	2,135	2,220	472	518	4,257	4,539	-6.2
	Gun	58	55	6.1	105	85	18	24	181	163	10.8
	Crossbow	168	188	-10.8	215	249	54	61	437	498	-12.2
	Vertical Bow	42	59	-28.4	66	101	11	16	119	176	-32.3
Lake	Bonus Gun	7	9	-25.0	14	18	2	4	23	31	-25.0
	Muzzleloader	5	10	-50.0	16	23	2	3	23	36	-35.5
	Youth	6	4	50.0	4	2	2	1	12	7	71.4
	Total	287	327	-12.3	423	481	89	109	799	917	-12.9
	Gun	373	393	-5.1	386	448	56	63	815	904	-9.9
	Crossbow	254	245	3.8	134	130	15	18	403	393	2.6
	Vertical Bow	204	197	3.7	91	108	8	12	303	317	-4.3
Lawrence	Bonus Gun	34	46	-25.5	29	63	6	9	69	117	-41.0
	Muzzleloader	44	48	-8.3	78	79	5	8	127	135	-6.2
	Youth	53	42	26.2	21	22	4	6	78	70	11.4
	Total	967	974	-0.7	741	855	94	118	1,802	1,946	-7.4
	Gun	540	612	-11.7	728	926	155	215	1,423	1,753	-18.8
	Crossbow	756	747	1.2	665	668	131	134	1,552	1,549	0.2
	Vertical Bow	376	442	-15.0	380	475	40	67	796	984	-19.1
Licking	Bonus Gun	58	73	-20.9	126	147	22	37	206	257	-19.8
	Muzzleloader	140	100	40.0	234	236	42	39	416	375	10.8
	Youth	81	81	-0.4	48	51	17	17	146	149	-2.0
	Total	1,968	2,073	-5.0	2,194	2,530	412	512	4,574	5,115	-10.6

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	229	270	-15.2	310	347	75	101	614	718	-14.5
	Crossbow	235	231	1.9	287	260	70	67	592	558	6.1
	Vertical Bow	153	184	-17.0	173	203	29	31	355	418	-15.1
Logan	Bonus Gun	43	34	27.7	80	58	18	14	141	105	34.3
	Muzzleloader	38	37	3.6	87	83	15	16	140	136	3.2
	Youth	49	40	23.5	34	19	7	10	90	68	32.4
	Total	751	800	-6.1	977	976	215	239	1,943	2,015	-3.6
	Gun	244	232	5.2	307	339	77	101	628	672	-6.6
	Crossbow	373	410	-9.1	340	435	66	123	779	968	-19.5
	Vertical Bow	119	151	-21.0	148	217	32	39	299	407	-26.5
Lorain	Bonus Gun	45	47	-4.9	95	86	19	22	159	156	2.1
	Muzzleloader	30	33	-10.0	84	74	24	20	138	127	8.4
	Youth	34	27	25.9	17	18	8	7	59	52	13.5
	Total	847	910	-6.9	997	1,185	229	314	2,073	2,408	-13.9
	Gun	45	44	1.5	50	58	22	18	117	120	-2.8
	Crossbow	148	138	7.0	178	196	49	58	375	393	-4.6
	Vertical Bow	60	67	-10.0	90	96	16	23	166	185	-10.4
Lucas	Bonus Gun	8	7	20.0	14	8	1	2	23	17	38.0
	Muzzleloader	7	8	-8.7	19	12	1	3	27	22	22.7
	Youth	4	3	33.3	3	5	3	2	10	9	7.1
	Total	273	271	0.9	355	378	93	105	721	754	-4.4
	Gun	67	77	-13.4	65	72	14	14	146	163	-10.4
	Crossbow	72	81	-11.1	51	45	11	12	134	138	-2.7
	Vertical Bow	56	61	-7.7	52	46	2	7	110	113	-2.7
Madison	Bonus Gun	7	10	-30.0	12	17	0	5	19	32	-40.6
	Muzzleloader	16	10	60.0	19	14	2	3	37	27	38.8
	Youth	18	9	100.0	6	6	4	4	28	19	50.0
	Total	239	251	-4.9	208	201	33	44	480	497	-3.4
	Gun	255	205	24.6	279	300	81	94	615	599	2.7
	Crossbow	347	330	5.3	302	281	92	88	741	698	6.1
	Vertical Bow	116	127	-8.4	108	138	20	34	244	298	-18.2
Mahoning	Bonus Gun	31	41	-23.8	60	81	13	22	104	144	-27.8
	Muzzleloader	29	36	-20.2	73	76	25	15	127	127	-0.3
	Youth	35	21	69.4	15	16	6	9	56	46	22.6
	Total	814	766	6.3	843	904	240	264	1,897	1,933	-1.9

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harv	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	141	166	-15.2	150	188	44	43	335	398	-15.8
	Crossbow	94	92	2.2	86	81	17	19	197	192	2.6
	Vertical Bow	63	69	-8.7	47	67	6	12	116	147	-21.3
Marion	Bonus Gun	21	20	3.3	24	32	2	6	47	59	-20.3
	Muzzleloader	24	23	2.9	35	25	2	5	61	53	14.4
	Youth	15	16	-6.3	7	10	0	4	22	30	-26.7
	Total	364	391	-7.0	351	409	72	90	787	890	-11.6
	Gun	245	216	13.3	276	280	85	93	606	589	2.8
	Crossbow	364	363	0.2	348	315	84	84	796	762	4.4
	Vertical Bow	160	153	4.6	156	151	30	28	346	333	4.0
Medina	Bonus Gun	46	45	1.5	54	76	17	18	117	139	-15.8
	Muzzleloader	45	27	64.6	93	67	16	18	154	112	37.1
	Youth	21	18	18.9	15	13	7	5	43	36	20.6
	Total	886	834	6.2	952	914	243	250	2,081	1,998	4.2
	Gun	493	570	-13.5	618	721	122	121	1,233	1,412	-12.7
	Crossbow	471	453	3.9	281	284	23	37	775	774	0.1
	Vertical Bow	231	282	-18.2	172	179	9	19	412	481	-14.3
Meigs	Bonus Gun	61	69	-11.2	89	114	10	23	160	205	-22.1
	Muzzleloader	107	105	1.9	197	225	34	31	338	362	-6.5
	Youth	89	90	-1.1	43	42	6	10	138	142	-3.0
	Total	1,459	1,578	-7.5	1,409	1,575	204	242	3,072	3,394	-9.5
	Gun	84	109	-22.9	106	123	38	37	228	269	-15.2
	Crossbow	79	72	9.2	91	75	27	21	197	168	17.5
	Vertical Bow	47	48	-1.4	52	57	16	14	115	118	-2.5
Mercer	Bonus Gun	21	11	90.9	28	15	10	6	59	32	82.5
	Muzzleloader	16	9	77.8	25	13	4	2	45	25	82.4
	Youth	13	12	8.3	6	13	3	7	22	32	-30.5
	Total	262	263	-0.3	312	297	99	87	673	647	4.0
	Gun	64	96	-33.3	96	101	12	30	172	227	-24.3
	Crossbow	139	124	12.4	122	134	32	23	293	281	4.3
	Vertical Bow	76	82	-6.9	59	85	16	16	151	182	-17.2
Miami	Bonus Gun	13	13	2.6	21	18	4	9	38	39	-2.6
	Muzzleloader	10	11	-11.8	22	23	6	4	38	38	-0.9
	Youth	16	14	14.3	8	7	8	2	32	23	37.1
	Total	322	344	-6.3	335	370	78	84	735	798	-7.9

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	438	511	-14.3	564	617	100	130	1,102	1,258	-12.4
	Crossbow	322	337	-4.5	180	177	20	28	522	542	-3.7
	Vertical Bow	115	132	-12.9	83	70	8	12	206	214	-3.6
Monroe	Bonus Gun	27	57	-52.6	80	100	13	16	120	173	-30.5
	Muzzleloader	69	74	-6.3	135	187	10	25	214	285	-24.9
	Youth	52	59	-11.4	32	37	14	12	98	108	-9.0
	Total	1,031	1,176	-12.4	1,080	1,196	166	223	2,277	2,596	-12.3
	Gun	63	57	10.5	41	56	18	16	122	129	-5.7
	Crossbow	146	120	21.7	119	126	42	28	307	274	11.9
	Vertical Bow	76	68	11.8	98	105	29	23	203	196	3.7
Montgomery	Bonus Gun	8	9	-7.7	9	12	3	1	20	22	-7.7
	Muzzleloader	6	10	-37.9	23	18	2	2	31	29	6.9
	Youth	10	3	200.0	3	1	0	1	13	5	143.8
	Total	311	267	16.5	293	320	95	73	699	660	6.0
	Gun	432	491	-12.1	650	710	118	148	1,200	1,350	-11.1
	Crossbow	409	358	14.2	227	231	52	42	688	630	9.1
	Vertical Bow	254	270	-5.8	151	149	16	23	421	442	-4.7
Morgan	Bonus Gun	38	57	-33.7	68	102	12	20	118	180	-34.3
	Muzzleloader	98	106	-7.8	177	215	23	35	298	356	-16.3
	Youth	90	65	39.2	43	39	11	11	144	115	25.6
	Total	1,348	1,364	-1.2	1,337	1,472	238	286	2,923	3,122	-6.4
	Gun	230	239	-3.9	245	290	73	92	548	621	-11.8
	Crossbow	221	204	8.5	156	153	42	37	419	393	6.5
	Vertical Bow	110	119	-7.6	89	95	20	26	219	239	-8.5
Morrow	Bonus Gun	32	28	12.9	44	49	12	11	88	88	0.0
	Muzzleloader	31	27	16.3	83	56	19	10	133	93	43.5
	Youth	37	20	82.0	9	14	8	6	54	41	32.8
	Total	670	642	4.4	631	663	175	184	1,476	1,489	-0.9
	Gun	695	795	-12.6	1,031	1,185	192	257	1,918	2,237	-14.3
	Crossbow	648	634	2.2	459	398	59	74	1,166	1,106	5.5
	Vertical Bow	384	442	-13.2	283	291	22	33	689	766	-10.1
Muskingum	Bonus Gun	53	93	-43.0	134	174	19	34	206	301	-31.6
	Muzzleloader	168	132	27.3	257	296	30	61	455	489	-7.0
	Youth	105	94	12.1	52	65	15	16	172	175	-1.7
	Total	2,068	2,205	-6.2	2,241	2,435	337	480	4,646	5,119	-9.2

# **APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	476	514	-7.5	664	677	124	137	1,264	1,329	-4.9
	Crossbow	472	382	23.6	256	259	60	47	788	688	14.6
	Vertical Bow	175	201	-13.1	117	121	23	18	315	340	-7.4
Noble	Bonus Gun	30	52	-41.9	88	104	15	28	133	184	-27.6
	Muzzleloader	85	79	7.6	157	168	21	34	263	282	-6.6
	Youth	87	66	32.5	21	30	10	7	118	103	14.9
	Total	1,334	1,306	2.1	1,311	1,372	257	275	2,902	2,954	-1.7
	Gun	43	43	0.8	57	50	12	14	112	107	4.3
	Crossbow	100	88	14.1	83	95	26	24	209	206	1.5
	Vertical Bow	36	27	31.7	33	25	6	9	75	62	21.6
Ottawa	Bonus Gun	8	9	-7.7	10	13	2	3	20	25	-21.1
	Muzzleloader	9	8	17.4	18	17	8	2	35	27	31.3
	Youth	8	7	9.1	7	9	4	3	19	19	0.0
	Total	204	184	10.9	209	213	61	55	474	452	4.9
	Gun	140	162	-13.4	139	240	53	61	332	463	-28.3
	Crossbow	114	109	4.3	102	98	29	22	245	229	6.8
	Vertical Bow	75	69	8.2	47	66	9	14	131	150	-12.5
Paulding	Bonus Gun	37	24	56.3	60	36	18	11	115	70	63.5
	Muzzleloader	29	16	77.6	56	30	4	6	89	53	69.0
	Youth	18	19	-3.6	15	17	9	6	42	42	0.8
	Total	415	402	3.3	427	490	123	122	965	1,013	-4.8
	Gun	396	485	-18.3	528	635	119	138	1,043	1,257	-17.0
	Crossbow	352	363	-3.1	213	200	40	49	605	612	-1.1
	Vertical Bow	187	216	-13.6	126	139	20	21	333	376	-11.5
Perry	Bonus Gun	43	60	-28.7	64	107	11	21	118	189	-37.6
	Muzzleloader	75	72	4.2	134	146	20	30	229	247	-7.4
	Youth	59	66	-10.2	19	29	7	11	85	106	-19.6
	Total	1,122	1,269	-11.6	1,097	1,266	217	272	2,436	2,808	-13.2
	Gun	110	138	-20.3	110	150	24	30	244	319	-23.4
	Crossbow	90	97	-7.5	87	68	27	14	204	179	14.0
	Vertical Bow	76	75	1.8	44	58	3	9	123	142	-13.2
Pickaway	Bonus Gun	18	16	12.5	22	27	7	5	47	47	-0.7
	Muzzleloader	21	22	-3.1	47	27	6	4	74	53	39.6
	Youth	13	19	-32.8	8	10	7	3	28	33	-14.3
	Total	331	371	-10.9	320	345	76	67	727	783	-7.2

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	285	318	-10.4	330	422	75	82	690	822	-16.1
	Crossbow	328	315	4.2	184	208	25	39	537	562	-4.4
	Vertical Bow	171	215	-20.5	95	138	13	18	279	370	-24.7
Pike	Bonus Gun	37	35	4.7	51	74	7	10	95	119	-20.4
	Muzzleloader	63	59	6.2	92	95	14	17	169	171	-1.2
	Youth	58	42	38.1	28	26	5	7	91	75	20.8
	Total	945	991	-4.7	785	967	140	174	1,870	2,133	-12.3
	Gun	209	221	-5.4	245	258	104	77	558	556	0.3
	Crossbow	419	382	9.7	410	378	101	102	930	862	7.8
	Vertical Bow	130	141	-7.8	164	189	41	40	335	369	-9.3
Portage	Bonus Gun	42	42	-0.8	58	78	12	21	112	141	-20.8
	Muzzleloader	36	25	42.1	68	70	15	16	119	112	6.6
	Youth	17	24	-28.2	10	24	2	4	29	52	-44.2
	Total	921	883	4.3	1,058	1,067	310	277	2,289	2,226	2.8
	Gun	117	108	8.3	106	132	29	32	252	272	-7.4
	Crossbow	148	149	-0.9	153	115	35	26	336	291	15.5
	Vertical Bow	93	97	-4.1	79	88	18	20	190	205	-7.5
Preble	Bonus Gun	22	18	22.2	31	30	12	6	65	54	21.1
	Muzzleloader	18	16	10.2	45	39	14	10	77	65	19.1
	Youth	24	16	50.0	16	11	7	4	47	31	51.6
	Total	424	409	3.8	433	420	116	98	973	927	5.0
	Gun	92	127	-27.6	111	145	28	40	231	312	-26.0
	Crossbow	111	95	17.3	84	78	18	28	213	201	6.0
	Vertical Bow	58	63	-7.4	52	55	10	9	120	127	-5.5
Putnam	Bonus Gun	21	10	110.0	28	17	5	6	54	33	65.3
	Muzzleloader	8	6	26.3	18	10	1	3	27	19	39.7
	Youth	22	18	22.2	18	11	2	4	42	33	27.3
	Total	313	322	-2.9	317	319	65	90	695	731	-5.0
	Gun	413	464	-11.1	563	624	162	176	1,138	1,264	-10.0
	Crossbow	452	440	2.7	449	390	99	91	1,000	921	8.6
	Vertical Bow	227	265	-14.2	229	265	35	41	491	571	-14.0
Richland	Bonus Gun	63	67	-6.4	122	113	37	26	222	206	7.9
	Muzzleloader	78	59	33.0	165	139	26	29	269	227	18.3
	Youth	59	47	25.5	45	34	8	13	112	95	18.3
	Total	1,298	1,355	-4.2	1,586	1,579	370	380	3,254	3,313	-1.8

# **APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	412	489	-15.7	448	592	77	117	937	1,198	-21.8
	Crossbow	441	443	-0.4	297	300	42	50	780	793	-1.6
	Vertical Bow	277	313	-11.4	195	227	16	31	488	570	-14.4
Ross	Bonus Gun	47	54	-12.4	75	99	5	16	127	169	-24.9
	Muzzleloader	87	90	-3.0	156	150	14	29	257	269	-4.6
	Youth	94	91	3.7	31	39	11	13	136	143	-4.7
	Total	1,371	1,491	-8.0	1,212	1,418	166	260	2,749	3,169	-13.3
	Gun	83	99	-16.2	97	116	36	35	216	250	-13.6
	Crossbow	167	154	8.2	151	153	33	37	351	345	1.8
	Vertical Bow	51	64	-20.7	54	63	5	17	110	145	-24.0
Sandusky	Bonus Gun	17	20	-13.6	28	34	9	5	54	59	-8.5
	Muzzleloader	23	13	76.9	32	34	8	8	63	55	14.5
	Youth	18	9	92.9	6	6	5	2	29	18	64.2
	Total	360	365	-1.4	371	409	98	106	829	880	-5.8
	Gun	315	366	-14.0	389	514	76	100	780	981	-20.5
	Crossbow	399	378	5.5	205	261	35	37	639	676	-5.5
	Vertical Bow	191	299	-36.2	140	166	14	22	345	488	-29.3
Scioto	Bonus Gun	35	51	-30.9	65	92	6	19	106	161	-34.3
	Muzzleloader	57	69	-17.8	106	110	13	18	176	197	-10.8
	Youth	58	46	26.1	35	33	5	11	98	90	9.3
	Total	1,059	1,219	-13.1	947	1,186	149	208	2,155	2,613	-17.5
	Gun	278	325	-14.4	376	394	81	108	735	826	-11.1
	Crossbow	235	242	-2.8	200	177	47	45	482	464	4.0
	Vertical Bow	78	107	-27.1	102	118	10	19	190	244	-22.0
Seneca	Bonus Gun	49	39	26.7	78	64	20	17	147	120	22.8
	Muzzleloader	42	25	65.8	54	54	21	12	117	92	27.6
	Youth	48	36	32.1	27	32	8	10	83	79	5.1
	Total	733	779	-5.9	850	848	187	213	1,770	1,841	-3.8
	Gun	105	130	-19.4	128	191	49	50	282	371	-24.1
	Crossbow	123	120	2.2	108	124	31	30	262	275	-4.6
	Vertical Bow	69	82	-16.2	73	83	17	18	159	183	-13.1
Shelby	Bonus Gun	22	16	40.4	36	26	9	10	67	51	31.4
	Muzzleloader	18	15	20.0	48	37	4	12	70	63	10.5
	Youth	25	25	0.0	16	16	4	6	45	47	-4.9
	Total	367	392	-6.4	412	479	116	127	895	998	-10.3

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	296	293	1.0	416	441	98	113	810	847	-4.4
	Crossbow	513	421	21.9	467	465	92	103	1,072	989	8.4
	Vertical Bow	171	200	-14.6	203	258	40	44	414	503	-17.6
Stark	Bonus Gun	56	52	7.0	92	110	21	26	169	188	-9.9
	Muzzleloader	57	50	14.0	121	112	31	23	209	185	13.0
	Youth	51	26	96.2	21	24	9	9	81	60	35.8
	Total	1,153	1,057	9.1	1,331	1,427	295	323	2,779	2,806	-1.0
	Gun	56	67	-16.0	71	81	25	19	152	167	-8.8
	Crossbow	402	385	4.3	410	417	101	111	913	914	-0.1
	Vertical Bow	104	137	-24.3	166	171	44	36	314	344	-8.6
Summit	Bonus Gun	12	17	-29.4	19	16	2	3	33	36	-8.3
	Muzzleloader	10	10	3.4	12	21	10	3	32	34	-5.9
	Youth	8	5	60.0	4	2	2	0	14	7	100.0
	Total	593	625	-5.2	685	713	186	173	1,464	1,511	-3.1
	Gun	360	386	-6.7	581	601	178	190	1,119	1,177	-4.9
	Crossbow	588	519	13.4	505	526	147	161	1,240	1,206	2.8
	Vertical Bow	168	183	-8.0	200	257	58	60	426	499	-14.7
Trumbull	Bonus Gun	60	66	-9.1	131	143	36	42	227	251	-9.6
	Muzzleloader	38	40	-5.8	122	129	30	37	190	206	-7.9
	Youth	46	29	60.5	30	27	21	14	97	70	39.2
	Total	1,324	1,269	4.4	1,639	1,749	486	526	3,449	3,544	-2.7
	Gun	709	771	-8.0	1,064	1,106	220	248	1,993	2,125	-6.2
	Crossbow	712	654	8.9	615	514	102	95	1,429	1,263	13.1
	Vertical Bow	363	398	-8.9	373	339	43	44	779	781	-0.2
Tuscarawas	Bonus Gun	76	103	-26.2	165	193	41	55	282	351	-19.6
	Muzzleloader	125	125	-0.3	292	271	50	44	467	440	6.1
	Youth	121	105	15.2	82	61	23	29	226	195	15.9
	Total	2,118	2,183	-3.0	2,618	2,524	485	521	5,221	5,228	-0.1
	Gun	126	132	-4.5	116	151	39	36	281	319	-11.9
	Crossbow	135	128	5.5	123	98	21	24	279	249	11.9
	Vertical Bow	77	96	-20.1	92	95	24	17	193	209	-7.5
Union	Bonus Gun	26	16	59.2	18	20	5	5	49	41	18.5
	Muzzleloader	29	15	97.7	44	25	6	6	79	46	73.0
	Youth	20	17	20.0	13	11	4	3	37	30	23.3
	Total	415	409	1.5	407	405	99	91	921	904	1.8

# **APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Т	otal Harve	est
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)
	Gun	83	103	-19.4	67	100	25	20	175	224	-21.8
	Crossbow	56	62	-10.2	51	42	21	9	128	113	12.9
	Vertical Bow	26	31	-17.0	25	32	4	4	55	67	-18.3
Van Wert	Bonus Gun	20	11	76.5	31	14	9	4	60	29	104.5
	Muzzleloader	11	8	37.5	16	10	5	3	32	21	50.0
	Youth	18	13	35.0	14	7	6	3	38	23	62.9
	Total	217	232	-6.5	205	206	70	45	492	483	1.9
	Gun	375	488	-23.2	470	646	94	125	939	1,259	-25.4
	Crossbow	370	334	10.7	244	217	41	42	655	593	10.5
	Vertical Bow	203	246	-17.4	143	163	11	27	357	435	-18.0
Vinton	Bonus Gun	40	57	-29.8	56	98	12	20	108	175	-38.3
	Muzzleloader	62	87	-28.5	138	159	10	30	210	276	-23.8
	Youth	64	52	23.9	27	26	1	8	92	85	7.8
	Total	1,126	1,274	-11.6	1,084	1,316	169	253	2,379	2,843	-16.3
	Gun	135	117	15.1	98	135	28	36	261	288	-9.5
	Crossbow	237	243	-2.5	186	178	37	33	460	454	1.2
	Vertical Bow	117	137	-14.6	96	121	23	21	236	279	-15.4
Warren	Bonus Gun	16	14	14.3	32	29	4	7	52	51	2.6
	Muzzleloader	30	25	21.6	29	42	12	7	71	73	-3.2
	Youth	14	16	-12.5	16	8	4	3	34	26	29.1
	Total	552	556	-0.8	464	518	109	108	1,125	1,182	-4.8
	Gun	560	645	-13.2	696	808	151	150	1,407	1,602	-12.2
	Crossbow	458	428	6.9	238	232	33	33	729	694	5.0
	Vertical Bow	216	261	-17.1	126	143	10	16	352	420	-16.1
Washington	Bonus Gun	49	65	-24.6	72	108	10	14	131	188	-30.2
	Muzzleloader	121	104	16.3	195	231	21	34	337	369	-8.7
	Youth	73	77	-5.2	40	39	5	8	118	124	-4.6
	Total	1,488	1,591	-6.5	1,377	1,570	232	258	3,097	3,418	-9.4
	Gun	247	249	-0.9	364	386	85	108	696	743	-6.4
	Crossbow	294	294	0.0	292	262	65	56	651	612	6.4
	Vertical Bow	128	146	-12.1	148	171	35	27	311	343	-9.3
Wayne	Bonus Gun	36	43	-16.3	76	69	16	19	128	131	-2.5
	Muzzleloader	55	33	66.7	120	88	19	21	194	142	36.3
	Youth	39	36	7.3	26	23	12	10	77	69	12.1
	Total	806	811	-0.6	1,039	1,016	236	246	2,081	2,072	0.4

**APPENDIX 1**COUNTY HARVEST SUMMARIES

			Bucks		D	oes	Butto	n Bucks	Total Harvest			
County	Season	2018	3-year average	Diff. (%)	2018	3-year average	2018	3-year average	2018	3-year average	Diff. (%)	
	Gun	230	292	-21.1	256	340	59	90	545	722	-24.5	
	Crossbow	220	211	4.4	150	184	35	40	405	435	-6.8	
	Vertical Bow	126	145	-13.1	119	137	13	25	258	307	-16.0	
Williams	Bonus Gun	71	37	93.6	81	54	16	12	168	103	62.6	
	Muzzleloader	36	31	16.1	57	47	18	12	111	90	23.8	
	Youth	23	19	23.2	14	12	6	4	43	35	22.9	
	Total	717	738	-2.8	688	782	150	187	1,555	1,707	-8.9	
	Gun	126	138	-8.9	112	139	35	30	273	307	-11.0	
	Crossbow	190	151	25.6	105	108	21	29	316	288	9.7	
	Vertical Bow	74	88	-15.9	70	60	6	14	150	162	-7.4	
Wood	Bonus Gun	34	17	104.0	26	19	9	5	69	41	68.3	
	Muzzleloader	20	14	42.9	25	20	6	5	51	39	31.9	
	Youth	18	14	28.6	12	9	4	5	34	28	22.9	
	Total	469	427	9.8	355	361	81	89	905	876	3.3	
	Gun	221	266	-16.9	297	368	78	88	596	722	-17.5	
	Crossbow	144	135	6.7	130	121	31	22	305	278	9.8	
	Vertical Bow	93	110	-15.5	103	112	18	16	214	238	-10.1	
Wyandot	Bonus Gun	37	25	48.0	49	40	16	13	102	78	31.3	
	Muzzleloader	29	32	-9.4	68	53	11	13	108	98	9.8	
	Youth	45	31	46.7	24	22	14	8	83	61	36.8	
	Total	585	617	-5.2	687	735	176	167	1,448	1,519	-4.7	